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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,710	03/17/2006	Dong Zhu	884A.0129.U1(US)	4697

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EXAMINER	
HANNON, CHRISTIAN A	

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2618	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/572,710	ZHU ET AL.	
	Examiner	Art Unit	
	CHRISTIAN A. HANNON	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 December 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11, 13-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-11 and 13-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This action is response to applicant's response filed on 12/30/2009. Claims 1-11, 13-28 are now pending in the present application. **This action is made final.**

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-9, 11 & 13-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaplan (US 6,690,358) in view of Salmi et al (US 7,158,626), hereinafter Salmi.

Regarding claims 1, 15 and 26, Kaplan teaches a mobile cellular telephone, method and computer executable instructions comprising, a processor configured to control the operation of a mobile cellular telephone (it is noted by the examiner that while Kaplan draws illustrative examples to a PDA, the teaching is not so limited, as Kaplan explicitly teaches use of the art's teachings in a cellular phone at column 1, lines 5-46 and a display (Column 1, Lines 61-53; Column 2, lines 12; Column 5, Lines 13-16; Screen 110; Figure 1;Kaplan) of the mobile cellular telephone, while Kaplan uses a PDA as an example, the summary section makes clear the teachings are for hand-held devices, of which Kaplan explicitly describes a mobile cell phone (see column 1,

lines 9-12, 50-52; Kaplan), an incline sensor, accelerometer, configured to detect inclination of the mobile telephone in a first plane (Column 2, Lines 46-50; Kaplan), wherein the mobile cellular telephone has an inclinometer mode, or cursor display mode, in which the processor is configured to receive an indication of the detected incline in the first plane from the incline sensor and control the display to display (Column 3, Lines 66-67; Column 4, Lines 1-2; Kaplan), to a user of the mobile cellular phone, it is noted by the examiner that the purpose of the display as taught by Kaplan is obviously to provide information to a device end user, information, furthermore Kaplan teaches a user input sensitive to the sense and dependent inclination of the handheld device so that a display element is dependent on the received indication. However, Kaplan fails to teach a bar and an item, at a position within the bar dependent upon the received indication, the position of the item when the bar representative, wherein a display has a first area and a bar has a second area, wherein the second area is smaller than the first area. Salmi teaches a display having a first area (display as shown in figure 6, everywhere but item 62) and a bar with a second area (line attached to item 62 of figure 6 and associated area), where the second area is smaller than the first area (figure 6 as shown item 62 takes up less area than remainder of the display area of figure 6), furthermore, Salmi teaches a bar and an item positioned within the bar (see figure 6, bar is the line attached to the item element 62; Salmi), that is dependent upon a received indication input from a user (see column 7, lines 5-10; Salmi). Therefore, it would be obvious to one of ordinary skill in the art to combine the accelerometer user input teachings of

Kaplan, with the display bar teachings of Salmi in order to implement a graphic representation of contemplated displays, as Kaplan does not teach a direct graphical representation, one of ordinary skill in the art would look to any known equivalent such as the one taught by Salmi.

Regarding claim 2, Kaplan and Salmi teach claim 1, wherein the processor receives real-time indications of the detected incline in the first plane from the incline sensor and controls the display to move an item, in real-time through positions dependent upon the received indications (Column 3, Lines 52-67; Column 4, Lines 1-2; Kaplan).

Regarding claim 3, Kaplan and Salmi teach claim 1, wherein the display has a fist axis and the processor controls the display to display an item at a position along the first axis dependent upon the received indication (Column 3, Lines 52-67; Column 4, Lines 1-14; Kaplan).

Regarding claim 4, Kaplan and Salmi teach claim 1, wherein the incline sensor is configured to additionally detect inclination of the mobile telephone in a second plane (Kaplan teaches both x-y & z-x planes, for example), orthogonal to the first plane, wherein, in the inclinometer mode, the processor receives an indication of the detected incline in the second plane from the incline sensor and controls the display to display a further item at a position dependent upon the received indication (Column 3, Lines 52-67; Column 4, Lines 1-14; Kaplan).

Regarding claims 5 & 16, Kaplan and Salmi teach claims 4 & 15, wherein the processor receives real-time indication of the detected incline in the first and second planes from the incline sensor and controls the display to move the item

and the further item in real-time through positions dependent upon the received indications, Kaplan teaches that the cursor, or spirit level function, can be moved in real time based on real-time processing (Column 3, Lines 52-67; Column 4, Lines 1-14; Kaplan).

Regarding claims 6 & 17, Kaplan and Salmi teach claims 4 & 15, wherein the display has a first axis and a second axis orthogonal with the first axis and the processor controls the display to display the item at a position along the first axis dependent upon the received indication of the detected incline in the first plane and the further time at a position along the second axis dependent upon the received indication of the detected incline in the second plane (Column 3, Lines 52-67; Column 4, Lines 1-14; Kaplan).

Regarding claims 7 & 18, Kaplan and Salmi teach claims 1 & 15, wherein the incline sensor is additional configured to detect inclination of the mobile telephone in a second plane, orthogonal to the first plane and the processor in the inclinometer mode receives a first indication of the detected inline in the first plane and a second indication of the detected incline in the second plane from the incline sensor and controls the display to display the item at a position dependent upon the received first and second indications (Column 3, Lines 52-67; Column 4, Lines 1-14; Kaplan).

Regarding claims 8 & 20, Kaplan and Salmi teach claims 7 & 18, wherein the display has a first axis and a second axis orthogonal with the first axis and the processor controls the display to display the item at a co-ordinate position (I, j), or (x, y or z coordinates as taught by Kaplan), wherein the first co-ordinate is

dependent upon the received indication of the detected incline in the first plane and second co-ordinate is dependent upon the received indication of the detected incline in the second plane (Column 3, Lines 52-67; Column 4, Lines 1-14; Kaplan).

Regarding claims 9 & 19, Kaplan and Salmi teach claims 7 & 18, wherein the processor receives real time indications of the detected incline in the first and second planes from the incline sensor and controls the display to move the item in real time through positions dependent upon the received indications (Column 3, Lines 52-67; Column 4, Lines 1-14; Kaplan).

Regarding claim 11, Kaplan teaches an mobile cellular telephone comprising, a processor configured to control the operation of a mobile cellular telephone (it is noted by the examiner that while Kaplan draws illustrative examples to a PDA, the teaching is not so limited, as Kaplan explicitly teaches use of the art's teachings in a cellular phone at column 1, lines 5-46) a display (Column 2, Line 12; Screen 110; Figure 1; Kaplan) (Column 1, Lines 61-53; Column 5, Lines 13-16; Kaplan) of the mobile cellular phone, a first incline sensor configured to detect an inclination of the mobile telephone when in a first orientation (Accelerometer item 10; Column 2, Lines 41-44; Kaplan) and a second incline sensor configured to detect an inclination of the mobile telephone when in a second orientation (Accelerometer item 11; Column 2, Lines 41-44; Kaplan), wherein the mobile cellular telephone has an inclinometer mode, cursor display mode, in which the processor is configured to determine an approximate orientation of the mobile telephone from inputs from the first and second incline

sensors and automatically control the display to display information (Column 3, Lines 66-67; Column 4, Lines 1-2; Kaplan), furthermore Kaplan teaches a user input sensitive to the sense and dependent inclination of the handheld device so that a display element is dependent on the received indication. However, Kaplan fails to teach a bar and an item, at a position within the bar dependent upon the received indication, the position of the item when the bar representative, wherein a display has a first area and a bar has a second area, wherein the second area is smaller than the first area. Salmi teaches a display having a first area (display as shown in figure 6, everywhere but item 62) and a bar with a second area (line attached to item 62 of figure 6 and associated area), where the second area is smaller than the first area (figure 6 as shown item 62 takes up less area than remainder of the display area of figure 6), furthermore, Salmi teaches a bar and an item positioned within the bar (see figure 6, bar is the line attached to the item element 62; Salmi), that is dependent upon a received indication input from a user (see column 7, lines 5-10; Salmi). Therefore, it would be obvious to one of ordinary skill in the art to combine the accelerometer user input teachings of Kaplan, with the display bar teachings of Salmi in order to implement a graphic representation of contemplated displays, as Kaplan does not teach a direct graphical representation, one of ordinary skill in the art would look to any known equivalent such as the one taught by Salmi.

Regarding claim 13, Kaplan and Salmi teach the use of a mobile telephone as claimed in claim 1 for measuring an incline (Column 4, Lines 5-14; Kaplan).

Regarding claim 14, Kaplan and Salmi teach the use of a mobile telephone as claimed in claim 1, for correcting an incline (Column 4, Lines 5-14; Kaplan).

Regarding claim 21, Kaplan and Salmi teach claim 15, wherein detecting inclination of the mobile telephone in a second plane, orthogonal to the first plane, and when in the inclinometer mode, the method includes receiving a first indication of the detected incline in the first pane and a second indication of the detected incline in the second plane and controlling the display to display the item at a position dependent upon the received first and second indications (Column 3, Lines 52-67; Column 4, Lines 1-14; Kaplan).

Regarding claim 22, Kaplan and Salmi teach claim 21, wherein the display has a first axis and a second axis orthogonal with the first axis and the method includes controlling the display to display the item at a co-ordinate position, wherein the first co-ordinate is dependent upon the received indication of the detected incline in the first plane and second co-ordinate is dependent upon the received indication of the detected incline in the second plane (Column 3, Lines 52-67; Column 4, Lines 1-14; Kaplan).

Regarding claim 23, Kaplan and Salmi teach claim 21, comprising receiving real time indications of the detected incline in the first and second planes and controlling the display to move the item in real time through positions dependent upon the received indications (Column 3, Lines 52-67; Column 4, Lines 1-14; Kaplan).

Regarding claim 24, Kaplan and Salmi teach claim 1, wherein the mobile cellular telephone emulates a spirit level when it is in the inclinometer mode (Column 4, Lines 5-15; Kaplan).

Regarding claim 25, Kaplan and Salmi teach an mobile cellular telephone comprising a display (Column 2, Line 12; Screen 110; Figure 1; Kaplan), a processor configured to control the operation of a mobile cellular telephone including the display (it is noted by the examiner that while Kaplan draws illustrative examples to a PDA, the teaching is not so limited, as Kaplan explicitly teaches use of the art's teachings in a cellular phone at column 1, lines 5-46) including the display (Column 1, Lines 61-53; Column 5, Lines 13-16; Kaplan), an incline sensor configured to detect inclination of the mobile telephone in a first plane, wherein the mobile cellular telephone has an inclinometer mode, cursor display mode, in which the processor is configured to receive an indication of the detected incline in the first plane from the incline sensor and control the display to display information, to a user of the mobile telephone (Column 3, Lines 66-67; Column 4, Lines 1-2; Kaplan), furthermore Kaplan teaches a user input sensitive to the sense and dependent inclination of the handheld device so that a display element is dependent on the received indication. However, Kaplan fails to teach a bar and an item, at a position within the bar dependent upon the received indication, the position of the item when the bar representative, wherein a display has a first area and a bar has a second area, wherein the second area is smaller than the first area. Salmi teaches a display having a first area (display as shown in figure 6, everywhere but item 62) and a bar with a second area (line attached

to item 62 of figure 6 and associated area), where the second area is smaller than the first area (figure 6 as shown item 62 takes up less area than remainder of the display area of figure 6), furthermore, Salmi teaches a bar and an item positioned within the bar (see figure 6, bar is the line attached to the item element 62; Salmi), that is dependent upon a received indication input from a user (see column 7, lines 5-10; Salmi). Therefore, it would be obvious to one of ordinary skill in the art to combine the accelerometer user input teachings of Kaplan, with the display bar teachings of Salmi in order to implement a graphic representation of contemplated displays, as Kaplan does not teach a direct graphical representation, one of ordinary skill in the art would look to any known equivalent such as the one taught by Salmi.

Regarding claim 27, Kaplan and Salmi teach claim 1, wherein movement of the item within the bar indicates rotation of the mobile cellular telephone about an x axis, or z axis, the x axis being perpendicular to the plane of the display, as disclosed the display is perpendicular to the z axis, as Kaplan teaches Cartesian coordinates (see column 4, lines 5-14; Kaplan).

Regarding claim 28, Kaplan and Salmi teach claim 1, wherein the processor is configured to control the display to display a menu structure, menu as shown in figure 6 of Salmi, including an option, the option being selectable by a user to cause the mobile cellular telephone to enter a mode. As Kaplan discloses an inclinometer mode of operation for user input, it would be obvious to one of ordinary skill in the art, at the time the invention was made, to make the input system of Kaplan a selectable mode from a menu, such as the menu

disclosed by Salmi, in order to assist users of a handicap impeding them from using the mode explicitly disclosed by Kaplan, thereby creating a menu system to facilitate the physically impaired.

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaplan in view of Salmi and further in view of Kalinski et al (US 2003/0174307), hereinafter Kalinski.

Regarding claim 10, Kaplan teaches claim 1, however fails to teach wherein the incline sensor comprises a first pair of electrodes aligned along the first plane and partially immersed in a liquid for providing a first signal indicative of an incline in the first plane and a second pair of electrodes aligned along a second plane, orthogonal to the first plane and partially immersed in a liquid for providing a second signal indicative of an incline in the second plane. Kalinski teaches wherein the incline sensor comprises a first pair of electrodes aligned along the first plane and partially immersed in a liquid for providing a first signal indicative of an incline in the first plane and a second pair of electrodes aligned along a second plane, orthogonal to the first plane and partially immersed in a liquid for providing a second signal indicative of an incline in the second plane (Page 5, [0079]; Kalinski). Therefore it would be obvious to one of ordinary skill in the art to substitute Kalinski's sensor for the accelerometer of Kaplan, since they both provide the same purpose and there is only a finite number of sensor implementations reasonable to try.

Response to Arguments

4. Applicant's arguments filed 12/30/2009 have been fully considered but they are not persuasive.

Regarding Applicant's arguments requesting the evidentiary support of spirit levels in the market place, the Examiner has modified the claim rejections, without admitting that spirit levels are not widely accepted in the marketplace, to not require such a showing.

Regarding Applicant's assertion that Kaplan fails to teach an inclinometer mode, the Examiner respectfully disagrees (see page 14 Applicant' Remarks). The Examiner has interpreted the mode of operation affecting a geo-spatial user input system disclosed by Kaplan as the "inclinometer mode" (see column 4, lines 5-14; Kaplan).

Regarding Applicant's remarks that Kaplan does not disclose a bar displayed by a display (see page 14 Applicant' Remarks), it is noted that the Examiner has relied on Salmi for this teaching, not Kaplan.

Regarding Applicant's remarks that the scope of Kaplan is strictly confined to enabling user-friendly cursor positioning and control on a PDA display (see page 15, Applicant's Remarks), the Examiner respectfully disagrees. First, Kaplan is not so confined to the PDA as the Applicant implies, Kaplan explicitly relates the invention to hand held devices, and includes cellular phones in this definition (see column 1, lines 11 and 50-53; Kaplan). Second, "cursor" as defined by http://wordnetweb.princeton.edu/perl/webwn?s=cursor is an "indicator consisting of a movable spot of light on a visual display", simply put Kaplan

teaches a geo-spatial dependent user input system, so as to modify some aspect of a display (i.e. a movable spot of light). Applicant's importation of a strict ideal of what a cursor is, assumedly that commonly associated with a computer mouse pointer's indicia on a screen, is inconsistent with the broad Kaplan teachings.

Regarding Applicant's assertions that there is no suggestion to combine the references (see Applicant Remarks, page 16), the Examiner respectfully disagrees. Both Kaplan and Salmi are geared towards hand held devices with display, Kaplan provides a notable method for user input control, while Salmi discloses the specifics of a display. Accordingly one of ordinary skill in the art would be able to implement the control system taught by Kaplan, with the display output of Salmi, since Kaplan does not even discuss the output specifics, one of skill would look to art such as Salmi to fully implement the Kaplan teachings.

The above arguments are applicable to all independent claims, accordingly all dependent claims remain herein rejected.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory

period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTIAN A. HANNON whose telephone number is (571)272-7385. The examiner can normally be reached on Mon. - Fri. 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. A. H./
Examiner, Art Unit 2618
March 18, 2010

/Edward Urban/

Supervisory Patent Examiner, Art Unit 2618